UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,145	06/14/2001	Craig Partridge	BBNT-P01-368	8070

28120	7590	07/18/2006

FISH & NEAVE IP GROUP
ROPES & GRAY LLP
ONE INTERNATIONAL PLACE
BOSTON, MA 02110-2624

EXAMINER
DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/881,145	PARTRIDGE ET AL.
	Examiner	Art Unit	
	KAMAL B. DIVECHA	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 May 2006</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-10,13-20,23 and 24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-10,13-20,23 and 24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20060223</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

Response to Arguments

Applicant's arguments with respect to claims 1-10, 13-20 and 23-24 have been considered

but are moot in view of the new ground(s) of rejection.

Terminal Disclaimer

The terminal disclaimer filed on 10/24/05 has been recorded.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

The applicant failed to clearly and distinctly claims the subject matter as set forth in

claims 23-24. Claims 23-24 fails to disclose the subject matter, which applicant regards as his

invention.

It is unclear as to what applicant intends to cover in claims 23-24.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-24 are rejected under 35 U.S.C. 101 because the claimed invention lacks

patentable utility.

The claims fail to disclose a practical application that would have produced useful,

concrete and tangible results.

Claims 23-24 simply fails to produce useful, concrete and tangible results.

For more information on 35 USC 101, please refer to the 101 guidelines available on

USPTO website.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.   Claims 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong et al.

(hereinafter Wong, U. S. Patent No. 6,389,419 B1).

As per claim 23, Wong discloses in a device operatively coupled to a network, a

computer-readable data signal having a body portion for use in identifying an ingress location of

a target packet in said network (fig. 6), said body portion comprising:

      - a hash value identifying said target packet as detected by said device, said hash value of

      said target packet having been computed by said device (fig. 6 item #602, 608 and 610

      and fig. 7); and

      - identification information about said device (fig. 3c).

As per claim 24, Wong discloses the process comprising a data packet including header

portion, said header portion comprising: a network address (fig. 3c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2.   Claims 1-5, 7, 9, 10, 13-15, 17, 19-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Conklin et al. (hereinafter Conklin, U. S. Patent No. 5,991,881) in view of

Wong et al. (hereinafter Wong, U. S. Patent No. 6,389,419 B1).

As per claim 1, Conklin discloses in a network carrying a plurality of packets over at

least one network link, said network including a computer, a first network component having

memory and a processor and configured to store information in said memory about at least one

of said plurality of packets, and a second network component (fig. 16), a method for detecting

target packet comprising (col. 1 L10-65): receiving said at least one of said plurality of packets

over a link to obtain a received packet (fig. 7, fig. 8, col. 3 L60-65); receiving a query message

identifying a target packet at said first component (fig. 7, fig. 8, col. 3 L1-14); creating a reply if

said target packet has been encountered (col. 4 L9-60, col. 5 L10-60, fig. 6, fig. 9); and said first

network component making said reply available to said network if said target packet has been

encountered, wherein reply is capable of being used as part of a method for locating said

intrusion point for said first one of the packets (fig. 9),

However, Conklin does not disclose the process of determining a hash value of at least a

portion of said packet; using said has value to identify a location in a memory; setting a flag in

said memory, said flag associated with said location; and said first network component using a

flag in processing said query message to determine if said target packet has been encountered

(note that Conklin teaches the process of detecting an intrusion by pattern matching or

comparing, see col. 7 L50-65, fig. 7).

Wong, from the same field of endeavor explicitly discloses the process of determining a

hash value of at least a portion of said packet (fig. 2B item #222, fig. 2C item #242 and fig. 3C,

fig. 6 item #602, col. 6 L4-8); using said hash value to identify a location in a memory (fig. 2B

item #224, fig. 2C item #244, fig. 6 item #604); setting a flag in said memory, said flag

associated with said location (fig. 6 item #608, fig. 8 item #818820, 822, col. 6 L4-15, col. 7

L28-36, col. 9 L6-33); and said first network component using a flag in processing said query

message (a message or a packet) to determine if said target packet has been encountered (fig. 8

item #818, 820, 822 and fig. 6 item #608, 610, col. 5 L59-63, col. 6 L4-36).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time

the invention was made to modify Conklin in view of Wong in order to use the hashing

technique to determine or identify the packet.

One of ordinary skilled in the art would have been motivated because it would have located and/or identified the packet (whether target, incoming or outgoing) in a more efficient manner, which would have reduced the latency in the network appliance (Wong, col. 2 L19-41, col. 3 L27-30, L45-51).

As per claim 2, Conklin discloses the process wherein making said reply available to said network includes forwarding said reply to said second network component (fig. 9, col. 5 L10-60).

As per claim 3, Conklin discloses the process wherein said second network component is a computer (fig. 9, col. 5 L10-60).

As per claim 4, Conklin discloses the process wherein said reply contains a network address for said first network component (col. 6 L9-15).

As per claim 5, Conklin does not disclose the process wherein hash value is determined over the entire packet.

Wong, from the same field of endeavor discloses the process wherein the addresses in a packet are hashed (col. 5 L60 to col. 6 L35, fig. 2, fig. 5 and fig. 7-8).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Conklin in view of Wong in order to determine the hash value over the entire packet.

One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 1.

As per claim 7, Conklin discloses the process wherein said network is an Internet Protocol (IP) network (fig. 1)

As per claim 9, Conklin discloses the process wherein said first network component is a router (fig. 1-3).

As per claim 14, Conklin discloses the system wherein said first interface and second interface are combined into a single bi-directional interface (fig. 4).

As per claim 15, Conklin discloses the process wherein said reply is made available to another network (fig. 9).

As per claim 19, the combination of Conklin and Wong discloses the system wherein said reply is positive reply if said second has value matches at least one of said plurality of first hash values.

As per claim 20, Conklin discloses the system wherein said reply is forwarded to those of said devices one hop away (fig. 9 and fig. 3).

As per claims 10, 13 and 17, they do not teach or further define over the limitations in claims 1-5, 7, 9, 14-15, 19 and 20. Therefore claims 10, 13 and 17 are rejected for the same reasons as set forth in claims 1-5, 7, 9, 14-15, 19 and 20.

3.   Claims 8, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Conklin et al. (hereinafter Conklin, U. S. Patent No. 5,991,881) in view of Wong et al.

(hereinafter Wong, U. S. Patent No. 6,389,419 B1), and further in view of "Official Notice".

As per claim 8, Conklin in view of Wong does not explicitly disclose the process wherein

the link is a wireless link or network.

But, wireless networks and/or links are well known in the relevant art.

Official Notice is taken in order to indicate that the subject matter is in fact well known

and obvious in the art.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time

the invention was made to modify Conklin in view of Wong in order to implement the invention

in wireless networks.

One of ordinary skilled in the art would have been motivated because wireless networks

are very well known in the art.

As per claim 18, Conklin in view of Wong does not explicitly disclose a system wherein

the processor is an ASIC processor.

But, ASIC processors are simply well known and obvious in the relevant art.

Official Notice is taken to indicate that the ASIC processors are known and obvious in

the art.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time

the invention was made to modify Conklin in view of Wong in order to include ASIC processors.

One of ordinary skilled in the art would have been motivated because ASIC processors

are simply known in the art.

As per claim 16, it does not teach or further define over the limitations in claim 8 and 18. Therefore claim 16 is rejected for the same reasons as set forth in claim 8 and 18.

4.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin et al. (hereinafter Conklin, U. S. Patent No. 5,991,881) in view of Wong et al. (hereinafter Wong, U. S. Patent No. 6,389,419 B1), and further Cox et al. (hereinafter Cox, U. S. Patent No. 6,842,861).

As per claim 6, Conklin in view of Wong does not teach the process of determining if said received packet has undergone a transformation, such transformation having occurred if a first hash value of at least a portion of said packet computed at a first time is not equal to a second hash value of at least a portion of said packet computed at a second time, said second time occurring after said first time.

Cox teaches determining if said received packet has undergone a transformation, such transformation having occurred if a first hash value of at least a portion of said packet computed at a first time is not equal to a second hash value of at least a portion of said packet computed at a second time, said second time occurring after said first time (col.2, L 34-41).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the teaching of Wong to add determining if said received packet has undergone a transformation, such transformation having occurred if a first hash value of at least a portion of said packet computed at a first time is not equal to a second hash value of at least a portion of said packet computed at a second time, said second time occurring after said first time as taught by Cox in order to determine infected files (Cox, col. 2, line 34).

One ordinary skilled in the art at the time of the invention would have been motivated to combine Cox and Wong in order to provide a system to detect a file with a virus (Cox. col.1, lines 5-67).

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a.   Sheymov, U. S. Patent No. 6,981,146 B1: Network Intrusion Protection.

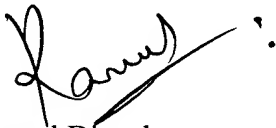   b.   Vaidya, U. S. Patent No. 6,279,113 B1: Network Intrusion Detection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kamal Divecha
Art Unit 2151
July 7, 2006.

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER